IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Cary A. Jardin et al. Art Unit : 2145
Serial No.: 10/840,067 Examiner : Adnan M. Mirza
Filed : May 5, 2004 Assignee : Intel Corporation
Title : SPEED SENSITIVE CONTENT DELIVERY IN A CLIENT-SERVER NETWORK

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

BRIEF ON APPEAL

Sir:

Applicant herewith files this brief on appeal under 37 CFR 41.37, thereby perfecting the notice of appeal which was originally filed on March 14, 2007.

The sections required by 37 CFR 41.37 follow.

(1) Real Party in Interest

This application is assigned of record to Intel Corporation who is hence the real party in interest.

(2) Related Appeals and Interferences

There are no known related appeals or interferences.

(3) Status of Claims

Claims 1-14 are pending. Claims 1, 6, and 11 are independent claims. Claims 1-14 are appealed herein.

(4) Status of Amendments

Claims were not amended after final rejection. Amendments after final rejection were entered for the purposes of appeal.

(5) Summary of Claimed Subject Matter

The presently claimed subject matter relates to measured data flow and to connecting a client to a particular destination based on the connection speed of the client. See, e.g., Specification, page 1, lines 9-11.

Independent claim 1 relates to a method of enhancing data delivery including sending a first packet from a client interface to a remote terminal at a first time (see, e.g., Specification, page 6, lines 21-22, reference numeral 310 in Fig. 3), receiving at the client interface a second packet from the remote terminal at a second time (see, e.g., Specification, page 6, line 20 - page 7, line 2, reference numeral 315 in Fig. 3), determining a response time of the remote terminal at the client interface based on a time period between the first time and the second time (see, e.g., Specification, page 7, lines 2-4), using said response time to determine information related to a connection speed between the first time and the second time (see, e.g., Specification, page 7, lines 2-4, page 9, lines 9-10, reference numeral 410 in Fig. 4), using said response time to determine information related to a connection speed between the remote terminal and the client interface (see, e.g., Specification, page 7, lines 5-9, page 9, lines 11-12), providing a plurality of different content versions, each having a different amount of information, each content version being optimized for a specific connection speed (see, e.g., Specification, page 5, line 21 - page 6, line 1, reference numerals 205, 210, 215, 220, and 225 in Figure 2), based on said determined connection speed, automatically selecting a content version from said plurality of content versions (see, e.g.,

Specification, page , lines 8-20, page 9, line 23 - page 10, line 9), and providing the remote terminal with the selected content version (see, e.g., Specification, page 8, lines 11-20, reference numeral 345 in Fig. 3, reference numeral 435 in Fig. 4).

Independent claim 6 relates to a method of connecting a remote terminal to a server including sending a first packet from a client interface to the remote terminal (see, e.g., Specification, page 6, lines 21-22, reference numeral 310 in Fig. 3), receiving at the client interface a second packet from the remote terminal (see, e.g., Specification, page 6, line 20 - page 7, line 2, reference numeral 315 in Fig. 3), determining a response time of the remote terminal at the client interface based on a time period elapsing between the first packet being sent and the second packet being received (see, e.g., Specification, page 7, lines 2-4, page 9, lines 9-10, reference numeral 410 in Fig. 4), using said response time to determine a connection speed between the remote terminal and the client interface (see, e.g., Specification, page 7, lines 2-4, page 9, lines 9-10, reference numeral 410 in Fig. 4), providing a plurality of content versions, each content version having a different amount of information at a server coupled to the client interface, each content version being optimized for a specific connection speed (see, e.g., Specification, page 5, line 21 - page 6, line 1, reference numerals 205, 210, 215, 220, and 225 in Figure 2), receiving a request for content (see, e.g., Specification, page 7, lines 10-12, page 9, lines 13-14, reference numeral 320 in Figure 3, reference numeral 415 in Figure 4), based on said connection speed, selecting a version corresponding to the request (see, e.g., Specification, page ,

lines 8-20, page 9, line 23 - page 10, line 9), and communicating data indicating the selected version to the remote terminal (see, e.g., Specification, page 8, lines 20-22, reference numeral 350 in Figure 3).

Independent claim 11 relates to an apparatus, including instructions residing on a machine-readable storage medium, for use in a machine-based system to handle a plurality of instructions, the instructions causing the machine system to send a first packet from a client interface to the remote terminal (see, e.g., Specification, page 6, lines 21-22, reference numeral 310 in Fig. 3), receive at the client interface a second packet from the remote terminal (see, e.g., Specification, page 6, line 20 - page 7, line 2, reference numeral 315 in Fig. 3), determine a response time of the remote terminal at the client interface based on a time period between the first packet being sent and the second packet being received(see, e.g., Specification, page 7, lines 2-4, page 9, lines 9-10, reference numeral 410 in Fig. 4), use said response time to determine a connection speed between the remote terminal and the client interface (see, e.g., Specification, page 7, lines 2-4, page 9, lines 9-10, reference numeral 410 in Fig. 4), access a plurality of content versions, each content version having a different amount of content, and each content version being optimized for a specific connection speed (see, e.g., Specification, page 5, line 21 - page 6, line 1, reference numerals 205, 210, 215, 220, and 225 in Figure 2), receive a request for content (see, e.g., Specification, page 7, lines 10-12, page 9, lines 13-14, reference numeral 320 in Figure 3, reference numeral 415 in Figure 4), based on said determined connection speed, select a content version corresponding to the

request (see, e.g., Specification, page , lines 8-20, page 9, line 23 - page 10, line 9), and communicate the selected version to the remote terminal (see, e.g., Specification, page 8, lines 20-22, reference numeral 350 in Figure 3).

(6) Grounds of Rejection to be Reviewed on Appeal

I. Rejections under 35 USC 102(e)

Claims 1-14 stand rejected under 35 USC 102(e) as allegedly being unpatentable over Banga et al. (US 5,931,904).

(7) Argument

Ground of Rejection I - Rejections under 35 USC 102(e)

Banga does not describe "determining a response time of the remote terminal at the client interface based on a time period between the first time and the second time," as recited in claim 1. The cited portion of the Office Action states:

> In order for the remote proxy to be able to send the difference data to the local proxy, it must calculate the difference data by comparing the current page, once it is received at the remote proxy, to the version of the page already available to know which version of the page is already present at the local proxy. This can be accomplished in several ways. First, the remote proxy must cache at least one version of the page (if the page requested by the user has never been requested by any user connected to the remote proxy, there would be no alternative to waiting for the full current page to be received at the remote proxy and sending the entire page, except that it may be possible to begin sending the entire current page before it is completely received at the remote proxy). (Emphasis added). See, Banga, col. 3, lines 22-36.

Thus, as described in Banga, the difference data calculated refers to the content difference between the current page, once

it is received at the remote proxy, and the version of the page already available. In contrast, claim 1 relates to determining a response time of the remote terminal at the client interface based on a time period between the first time and the second time. Since the claimed subject matter relates to determining a response time, and since Banga, instead, describes determining a difference in content, it should be seen that Banga does not describe determining a response time as recited in claim 1. For this reason alone, Banga does not disclose all the features of the claimed subject matter.

Further, since Banga does not disclose determining a response time, Banga certainly does not disclose using said response time to determine information related to a connection speed between the remote terminal and the client interface. Furthermore, since Banga does not disclose determining a connection speed based on response time, Banga does not disclose automatically selecting a content version from said plurality of content versions, and providing the remote terminal with the selected content version, as claimed.

Also, the Advisory Action contends that Banga describes "a plurality of different content versions." This contention is incorrect. Banga states:

> If the new version is larger than the difference data, then the remote proxy must make a decision based on how much larger the new version is. Because there is some time required for reconstruction by the local proxy, if the new version is the same size as, or only slightly larger than, the difference data, then it may still be faster (in terms of when the user will be able to view the requested page) to send the new version rather than the difference data. The determination of how much larger the new version can be before it no longer makes sense to send it may depend on a number of factors, which might have to be

> measured in real time, resulting in dynamic calculation of the threshold size for sending difference data rather than new data. However, if the calculation depends on variables that cannot be determined easily by the remote proxy, such as the processor speed at the user station, an alternative is to have the remote proxy simply assume that the new version can be up to about 120% of the difference data and still be sent in its entirety. (Emphasis added). See, Banga, col. 3, lines 30-47.

The cited portion of Banga (Banga, col. 3, lines 37-47) describes making a determination regarding whether to send the difference data, or an entirely new version, to a user station. Regardless of whether difference data or the new version is sent, Banga does not describe that the information sent to the user station is optimized for a specific connection speed. Instead, Banga describes a new version and difference data, which refers to the difference between an old and a new version, and determining which one to send based on the size of each. Neither Banga's new version nor the difference data are optimized for a specific connection speed.

In addition to the reasons discussed previously, Banga does not describe all the features of the claimed subject matter. As described above, Banga does not describe providing a plurality of different content versions, each having a different amount of information, each content version being optimized for a specific connection speed. Therefore, claim 1 is patentable. Claims 2-5 are also patentable at least for the same reasons and the additional recitations that they contain.

Claim 6 relates to sending a first packet from a client interface to the remote terminal, receiving at the client interface a second packet from the remote terminal, determining a response time of the remote terminal at the client interface

based on a time period elapsing between the first packet being sent and the second packet being received, using said response time to determine a connection speed between the remote terminal and the client interface, providing a plurality of content versions, each content version having a different amount of information at a server coupled to the client interface, each content version being optimized for a specific connection speed, receiving a request for content, based on said connection speed, selecting a version corresponding to the request, and communicating data indicating the selected version to the remote terminal. For reasons discussed above, Banga does not describe features recited in claim 6. Thus, claim 6 is patentable. Claims 7-10 are also patentable at least for similar reasons and the additional recitations that they contain.

Claim 11 recites features of an apparatus related to independent claim 6. Thus, claim 11 is patentable for reasons similar to claim 6. Claims 12-14 are also patentable at least for similar reasons and the additional recitations that they contain.

Accordingly, claims 1-14 are patentable over Banga et al. and Ground of Rejection I should be overturned.

Please apply the brief fee of $500, and any other charges or credits, to Deposit Account No. 06-1050.

Respectfully submitted,

Date: 5/14/07

Scott C. Harris
Reg. No. 32,030
Attorneys for Intel Corporation

Fish & Richardson P.C.
12390 El Camino Real
San Diego, California 92130
Telephone: (858) 678-5070
Facsimile: (858) 678-5099

Appendix of Claims

1. A method of enhancing data delivery comprising:

sending a first packet from a client interface to a remote terminal at a first time;

receiving at the client interface a second packet from the remote terminal at a second time;

determining a response time of the remote terminal at the client interface based on a time period between the first time and the second time;

using said response time to determine information related to a connection speed between the remote terminal and the client interface;

providing a plurality of different content versions, each having a different amount of information, each content version being optimized for a specific connection speed;

based on said determined connection speed, automatically selecting a content version from said plurality of content versions; and

providing the remote terminal with the selected content version.

2. The method of Claim 1, further comprising determining a data flow rate from the determined response time of the remote terminal, and wherein the determining the response time comprises:

starting a timer at the first time when the client interface sends the first packet to the remote terminal; and

stopping the timer at the second time when the client interface receives the second acknowledgement packet from the remote terminal.

3. The method of Claim 1, further comprising determining network congestion based on the determined response time.

4. The method of Claim 1, further comprising determining the response time based on a timing of a handshake between the remote terminal and the client interface.

5. The method of Claim 1, wherein selecting the destination address from a plurality of addresses is based on a requested address by the remote terminal and the determined response time.

6. A method of connecting a remote terminal to a server comprising:

sending a first packet from a client interface to the remote terminal;

receiving at the client interface a second packet from the remote terminal;

determining a response time of the remote terminal at the client interface based on a time period elapsing between the first packet being sent and the second packet being received;

using said response time to determine a connection speed between the remote terminal and the client interface;

providing a plurality of content versions, each content version having a different amount of information at a server coupled to the client interface, each content version being optimized for a specific connection speed;

receiving a request for content;

based on said connection speed, selecting a version corresponding to the request; and

communicating data indicating the selected version to the remote terminal.

7. The method of Claim 6, further comprising determining a data flow rate from the remote terminal based on the response time.

8. The method of Claim 6, wherein the requested destination address includes a main destination address and a plurality of sub-addresses, each of said sub-addresses corresponding to a connection speed and optimized for a said connection speed.

9. The method of Claim 6, further comprising determining a network congestion based on the determined response time.

10. The method of Claim 6, further comprising connecting the remote terminal to the selected destination address.

11. An apparatus, including instructions residing on a machine-readable storage medium, for use in a machine-based system to handle a plurality of instructions, the instructions causing the machine system to:

send a first packet from a client interface to the remote terminal;

receive at the client interface a second packet from the remote terminal;

determine a response time of the remote terminal at the client interface based on a time period between the first packet being sent and the second packet being received;

use said response time to determine a connection speed between the remote terminal and the client interface;

access a plurality of content versions, each content version having a different amount of content, and each content version being optimized for a specific connection speed;

receive a request for content;

based on said determined connection speed, select a content version corresponding to the request; and

communicate the selected version to the remote terminal.

12. The apparatus of Claim 11, wherein the instructions further cause the machine system to connect the remote terminal to the selected destination address.

13. The apparatus of Claim 11, wherein the response time includes effects for network congestion.

14. The apparatus of Claim 11, wherein the response time is determined based on the timing of a handshake between the remote terminal and the client interface.

Evidence Appendix

None.

Related Proceedings Appendix

None.